Amendments to the Specification

Kindly amend paragraphs [0004], [0016], [0018], [0020], [0036] and [0038] as follows:

[0004] ~~In~~ FIG. 1 illustrates the circuit configuration of a conventional temperature sensor.

[0016] According to one aspect of the present invention, a temperature sensor is equipped with a comparator circuit having an output node and a variable current node. The output node is a first voltage at a given temperature when a current at the variable current node is less than a threshold current, and a different second voltage at the given temperature when the current at the variable current node is more than the threshold current. The sensor is also equipped with a variable resistance circuit and a switching circuit. The variable resistance circuit includes at least n resistors of different values connected in series between the variable current node of the comparator and a supply voltage, where n is an integer of 4 or more, and the switching circuit selectively bypasses individual ones of the n resistors.

[0018] According to another aspect of the present invention, a temperature sensor is equipped with a comparator circuit having an output node and a variable current node, ~~wherein~~ wherein the output node is a first voltage at a given temperature when a current at the variable current node is less than a threshold current, and a different second voltage at the given temperature when the current at the variable current node is more than the threshold current. The temperature sensor is further equipped with a variable resistance circuit including a plurality of resistors connected in series, and a trimming circuit which selectively electrically

connects or disconnects individual ones of the resistors variable resistance circuit to the variable current node.

[0020] According to yet another aspect of the present invention, a method of determining a trip temperature of a temperature sensor is provided, where the temperature sensor is equipped with (a) a comparator circuit having an output node and a variable current node, where the output node is a first voltage at a given temperature when a current at the variable current node is less than a threshold current, and a different second voltage at the given temperature when the current at the variable current node is more than the threshold current, and (b) a variable resistance circuit including at least resistors R_1, R_2, ... R_n which are selectively connected in series between the variable current node of the comparator and a supply voltage, where n is an integer of 4 or more, and where $R_1 < R_2$, ... $R_{n-1} < R_n$. The method includes fixing a temperature of the temperature sensor to a first temperature, and conducting a test sequence in which the resistor R_n is connected between the variable current node of the comparator and the supply voltage, and in which the resistor R_n is set to remain connected between the variable current node and the supply voltage if the output node of the comparator is the first voltage, and the resistor R_n is bypassed between the variable current node and the supply voltage if the output node of the comparator is the second voltage. The test sequence is repeated for each of the remaining resistors R_{n-1} to R_1 in order. Then, upon completion of the final test sequence for the resistor R_1, the method further includes determining a trip resistance of the temperature sensor as a difference between the first temperature and an adjustment temperature corresponding to a total value of the resistors R_1, R_2, ... R_n which were set to remain connected between the variable current node and the supply voltage ~~if~~ of the output node of the comparator.

[0036] The n resistors may have arbitrarily different values, or they may have a mathematical relationship to one another. For example, where one resistor among the n resistors has a lowest resistance value, ~~and~~ the remaining resistors among the n resistors may have resistance values which are multiples of the lowest resistance value. In this embodiment, however, the variable resistance circuit 150 is configured by a binary weighted resistance string of resistors RU1, RU2, RU3, RU4, RU5 and RU6, where,

$$RU6 = 2 \cdot RU5 = 4 \cdot RU4 = 8 \cdot RU3 = 16 \cdot RU2 = 32 \cdot RU1$$

[0038] It is noted that the term "resistor" is broadly used herein to denote the presence of an electrical resistance between given nodes of the circuits of the invention. The ~~electrically~~ electrical resistance defining each resistor can be physically implemented a number of different ways, such as by a series connection of multiple IC resistive polysilicon patterns. Also, resistors which are said to have different resistive values can be configured by varying the number of series-connected resistive elements, where the resistive elements themselves have the same resistance values.